

Request for Reconsideration under 37 C.F.R. § 1.111  
U.S. Application No.: 09/497,513

Attorney Docket No.: Q57824

REMARKS

Claims 3-5 and 8-15 are all the claims pending in the application.

Applicant thanks the Examiner for allowing claims 3-5, 8-10, 12, and 13 and for indicating that claim 15 contains allowable subject matter.

The only remaining rejected claims are claims 11 and 14. In particular, claims 11 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over a newly found reference, U.S. Patent No. 6,172,970 to Ling et al. (hereinafter "Ling"). Applicant respectfully traverses this rejection and respectfully requests the Examiner to reconsider in view of the following comments.

Of these two rejected claims, only claim 11 is independent. Among a number of unique features not taught or suggested by the prior art reference cited by the Examiner, independent claim 11 recites: "the frequency shifter shifts the received signal in frequency corresponding to each of the antennas; and the combiner combines the signal shifted in frequency as a combining signal." The Examiner asserts that Ling's phase shifter is equivalent to the frequency shifting as set forth in claim 11 (see page 2 of the Office Action). Applicant respectfully disagrees.

In general, Ling teaches a low-complexity antenna diversity receiver. Ling teaches the multi-diversity receiver having two antennas, Ant.1 & Ant.2, each followed by a low-noise RF amplifier (LNA). The amplified signals, after appropriate amplitude adjustment and phase shifting, for example by a pair of controllable variable signal attenuators and a phase-shifter, is combined into a single signal stream by an RF-combiner. The signal stream thus combined is

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then processed by a front-end RF circuit which down-converts the RF-signal so that it can be processed by a demodulator and further operated on by a baseband processor which would in turn control the amplitude attenuators and the phase shifter (Fig. 1; col. 4, lines 34 to 49).

In particular, Ling teaches that after the LNA amplifiers, the phase shifter is only required in one of the two diversity branches to introduce relative phase shifting between the signal streams in the two branches. The resulting signals, after attenuation, phase shift or a combination thereof, are then summed at the signal combiner (col. 4, line 64 to col. 5, line 1). In other words, Ling teaches phase shifting one of the two received signals and then combining the phase shifted signal with the not shifted signal.

Ling, however, teaches phase shifting one of the two signals. That is, Ling fails to teach or suggest phase shifting the signal from each of the antennas. In other words, Ling does not teach shifting the received signal corresponding to each of the antennas. In Ling, at least one signal remains not shifted. Finally, Ling teaches combining the shifted signal with the not shifted signal and not combining the shifted signals. In short, Ling only teaches shifting some of the received signals and fails to teach or suggest shifting each of the received signals.

Therefore, "the frequency shifter shifts the received signal in frequency corresponding to each of the antennas; and the combiner combines the signal shifted in frequency as a combining signal," as set forth in claim 11 is not disclosed by Ling, which lacks shifting each of the received signals. For at least these exemplary reasons, Applicant respectfully submits that independent claim 11 is patentably distinguishable from Ling. Hence, Applicant respectfully

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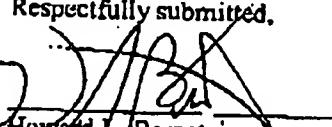
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requests the Examiner to reconsider and to withdraw this rejection. Claim 14 is patentable at least by virtue of its dependency on claim 11.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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